1   WHAT IS CLAIMED IS

5   1. A device for checking user identification,
comprising:
        a calculation unit which calculates a check
value by applying a user-specific formula to at least
10   one randomly generated number; and
        a matching unit which checks if the check
value matches a user-entered value that is entered by a
user in response to said at least one randomly
generated number presented to the user.
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        2. The device as claimed in claim 1, wherein
20   said calculation unit outputs a fixed number as the
check value if the user-specific formula consists of
the fixed number.

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        3. The device as claimed in claim 1, wherein
the user-specific formula includes a variable that is
an indication of a time at which said calculation unit
30   calculates the check value.

35   4. The device as claimed in claim 1, further
comprising:
        a control-data unit which stores therein user

IDs and user-specific formulas associated with respective user IDs;

a selection unit which selects the user-specific formula from said control-data unit in response to a user ID of said user; and

a random-number generating unit which generates said at least one randomly generated number.

5. The device as claimed in claim 4, further comprising a registration/updating unit which updates one of the user-specific formulas in the control data unit with a user-entered formula only if a user entering the user-entered formula proves knowledge of said one of the user-specific formulas by entering said one of the user-specific formulas.

6. A method of checking user identification, comprising the steps of:

calculating a check value by applying a user-specific formula to at least one randomly generated number; and

checking if the check value matches a user-entered value that is entered by a user in response to said at least one randomly generated number presented to the user.

7. The method as claimed in claim 6, wherein said step of calculating a check value outputs a fixed

1   number as the check value if the user-specific formula
    consists of the fixed number.

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    8. The method as claimed in claim 6, wherein
    the user-specific formula includes a variable that is
    an indication of a time at which said step of
10 calculating a check value calculates the check value.

15   9. The method as claimed in claim 6, further
    comprising the steps of:
        storing user IDs and user-specific formulas
    associated with respective user IDs in a data storage;
        selecting the user-specific formula from the
20 data storage in response to a user ID of said user; and
        generating said at least one randomly
    generated number.

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    10. The method as claimed in claim 9, further
    comprising a step of updating one of the user-specific
    formulas in the data storage with a user-entered
30 formula only if a user entering the user-entered
    formula proves knowledge of said one of the user-
    specific formulas by entering said one of the user-
    specific formulas.

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11. A computer-readable medium having a program embodied therein for causing a computer to check user identification, said program comprising:

a calculation code unit which calculates a check value by applying a user-specific formula to at least one randomly generated number; and

a matching code unit which checks if the check value matches a user-entered value that is entered by a user in response to said at least one randomly generated number presented to the user.

12. The computer-readable medium as claimed in claim 11, wherein said calculation code unit outputs a fixed number as the check value if the user-specific formula consists of the fixed number.

13. The computer-readable medium as claimed in claim 11, wherein the user-specific formula includes a variable that is an indication of a time at which said calculation code unit calculates the check value.

14. The computer-readable medium as claimed in claim 11, wherein said program further comprises:

a registration/updating code unit which stores user IDs and user-specific formulas associated with respective user IDs in a data storage;

a selection code unit which selects the user-specific formula from said data storage in response to

1   a user ID of said user; and

a random-number generating code unit which
generates said at least one randomly generated number.

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15. The computer-readable medium as claimed
in claim 14, wherein said registration/updating code
10   unit updates one of the user-specific formulas in the
data storage with a user-entered formula only if a user
entering the user-entered formula proves knowledge of
said one of the user-specific formulas by entering said
one of the user-specific formulas.

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